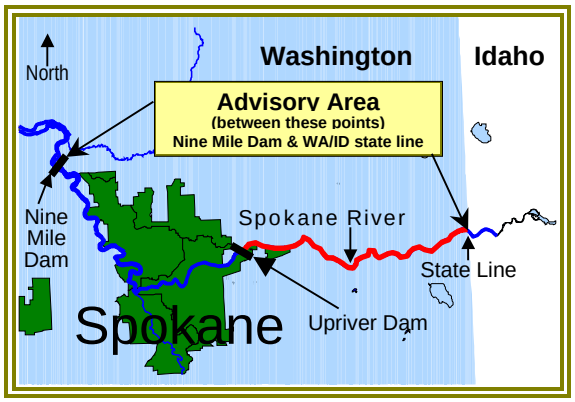
Health Advisory for Spokane River Fish Consumption

Update, March 2001

Background

In August 1999, the Washington State Departments of Ecology and Health, along with the Spokane Regional Health District, advised the public to limit consumption of Spokane River fish. The advisory addressed three fish species found to contain higher than normal lead levels and spanned the river from the Washington/Idaho state line to Seven Mile Bridge (just upstream of Nine Mile Dam).



Further testing of Spokane River fish showed the presence of polychlorinated biphenyls (PCBs). As a result, the fish advisory has been revised to include the PCB findings. To protect public health, your state and local health departments established new limits on the amount of fish that can be safely eaten from the area between the Washington/Idaho state line and Nine Mile Dam. See Table 1.

This information is not intended to discourage you from including fish in your diet, which is a good source of low-fat protein and essential fatty acids. A diet that includes fish every week can help lower your risk for heart disease. Use this advisory as a guide to help you plan which Spokane River fish to keep, as well as how often and how much to eat.

You also should be aware that, although this advisory specifically addresses certain species of fish from the Spokane River, other bodies of water within Washington State might also have advisories suggesting limits on the amount of fish that can be safely eaten.

Check with the local health department for current fish advisories that may pertain to areas where you fish.

Important health messages:

- **No one should eat any rainbow trout or mountain whitefish caught between Upriver Dam and the WA/ID state line.**
- **Suggested limits for the amount of fish that can be safely eaten have been set for areas above and below Upriver Dam.** See Table 1.
- **Pregnant women, women considering pregnancy and children through six years of age should carefully follow the meal limits given in** Table 1.

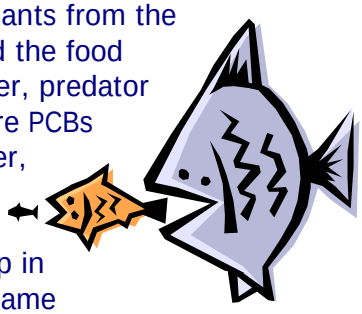
Contaminants of concern

Lead and PCBs were found at elevated levels in three fish species tested: **rainbow trout, mountain whitefish, and large scale suckers**. These fish were caught in the Spokane River between Nine Mile Dam and the Washington-Idaho state line. The area that is of most concern, where higher levels of PCBs are found in fish and sediment, is the stretch of river between Upriver Dam and the WA/ID state line. See the map. The red highlighted area shows the portion of the river above Upriver Dam. The metals cadmium and zinc were also found in fish but at levels that do not pose a health concern.

What are PCBs and lead and how did they get into the Spokane River?

PCBs are synthetic, man-made substances that were used as insulating fluid for electric transformers and capacitors. Production of PCBs was halted in the United States by the late 1970s. Because PCBs were used so extensively and take a long time to break down, they are found everywhere. PCBs accumulate in the fat of people and animals.

Lead is a naturally occurring element and exists at low levels throughout our environment. Decades of hard-rock mining activity in the region have caused the waters and sediments entering the Spokane River from Lake Coeur d'Alene to be high in lead and other metals.



Fish take in contaminants from the water they live in and the food they eat. Older, larger, predator fish tend to have more PCBs and lead than younger, smaller fish because these contaminants build up in fish over time. The same contaminants can build up in humans, too.

What are the harmful effects of PCBs and lead? Who should be concerned?

Pregnant women and women considering pregnancy should carefully follow the meal limits given in Table 1. The fetus is particularly susceptible to the harmful effects of lead and PCBs when the mother eats contaminated fish. Such effects can include learning problems that appear during childhood years.

Negative effects on a child's behavior and ability to learn can also occur in children exposed to lead from birth through six years of age. **Because lead was found at higher levels in whole fish samples, it is especially important for children under age six to eat only fillets according to the meal limits in Table 1.**

General Population

Animal studies have shown that PCBs affect the reproductive and immune systems, liver and thyroid. PCBs are considered probable human carcinogens. **All adults and children should observe the meal limits given in Table 1.**

How much fish should you eat?

No one should eat rainbow trout or mountain whitefish caught between Upriver Dam and the WA/ID state line. The advised fillet meal limits given in Table 1 below are considered protective of all adults (including pregnant women) and children. **All meals should be prepared as fillets because whole fish have higher levels of lead and PCBs.**

Table 1. Suggested fillet meal limits

Fish Species	Recommendation
Above Upriver Dam to WA/ID state line	
Rainbow trout	None
Mountain whitefish	None
Large scale suckers	One meal per month
Below Upriver Dam to Nine Mile Dam	
Rainbow trout	One meal per month
Mountain whitefish	One meal every other month
Large scale suckers	One meal per month

Note: One meal equals 8-ounces of fish for the average adult. Meal sizes are assumed to be less for children.

It's okay to eat different fish species but do not combine meal limits for each species. For example, each month you can have one trout ***or*** one sucker meal ***or*** you can have a whitefish meal every other month. Adults (***other than pregnant women and women considering pregnancy***) and children can eat more per month if they do not exceed the total that would be allowed in a year. For example, 12 rainbow trout meals could be eaten during the summer fishing months provided you do not eat any more trout, whitefish or sucker meals for the rest of that year.

Reduce exposure to contaminants in fish

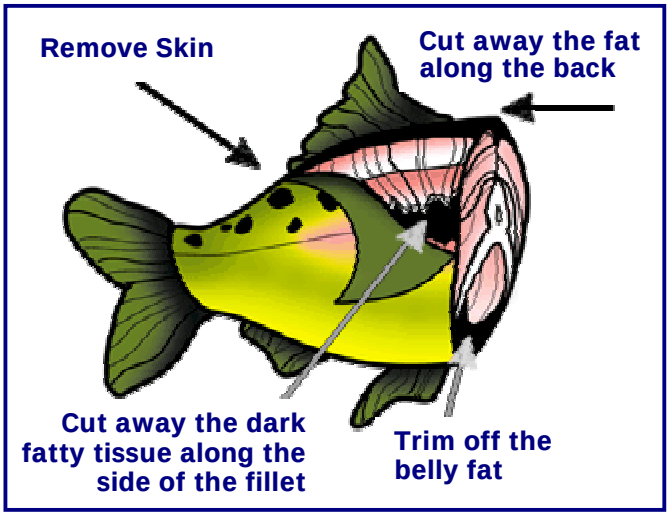
The fillet meal limits given in Table 1 are considered protective of health regardless of fish size, preparation or cooking. However, you can further reduce your exposure by choosing smaller fish and preparing and cooking your fish according to the instructions below.

Fillet Preparation

Remove the head, guts and bone of the fish (filleting), to reduce your lead exposure. PCBs, however, accumulate in the fat of the fish, so remove the skin and trim away the fat from your fillet to reduce PCB exposure.

Cooking Methods

Cooking does not destroy these types of contaminants, but the cooking method can help reduce your PCB exposure. Prepare your fish according to the diagram below then broil, grill, or bake it on a rack so the contaminated fat drips off the fish. Do not use the drippings for sauces or gravies.

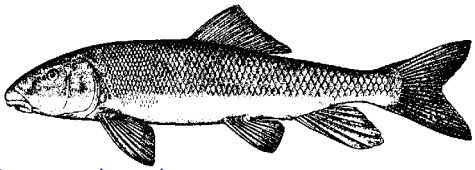


What do the fish of concern look like?

The Washington State Department of Fish and Wildlife provided the following pictures of the fish species discussed in this advisory.

Rainbow Trout

Mountain Whitefish



Large scale sucker

Other health issues concerning the Spokane River

Elevated levels of metals have been found in sandy beach soils along portions of the upper Spokane River, from Plantes Ferry upstream to the Washington/Idaho state line. The Spokane Regional Health District has issued an advisory on ways to enjoy the river yet limit contact with shoreline beach soils that contain lead. For a copy of that advisory call the Spokane Regional Health District at (509) 324 1560 ext 3.

For additional information

For additional information about health issues related to Spokane River fish consumption, please contact the Washington State Department of Health toll free at 1-877-485-7316. You may also call the Spokane Regional Health District at (509) 324 1560 ext 3.

Other Sources of Lead Exposure

Most lead exposure occurs in and around the home, through hobbies or use of lead-based paint. If your home was constructed before 1978, there is a possibility that your home contains lead-based paint. For more information on lead, lead-based paint and ways to reduce your exposure, please contact the Spokane Regional Health District at (509) 324-1560 ext 3.